



Product Evaluation

CWSF52 | 0117

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: CWSF-52

Effective Date: January 1, 2017

Re-evaluation Date: September 2020

Product Name: YHS 50 FS Aluminum Storefront System, Impact Resistant

Manufacturer: YKK AP America, Inc.
1229 Highway 441 Bypass
Dublin, Georgia 31021
(478) 277-1955

General Description:

The aluminum storefront system is an aluminum frame system used for commercial curtain wall installations. This evaluation report is for the Multiple Fixed Panel Storefront Assembly.

Doors: Doors referenced in this product evaluation report are YKK outswing doors products. The YKK outswing doors are not part of this product evaluation report. The YKK outswing doors used with these assemblies must be listed in a separate Texas Department of Insurance product evaluation report.

Product Identification: An YKK AP America Inc. label will be affixed to the curtain wall assembly.

Products Installed in Accordance with Drawing No. W14-37 (Large Missile Impact): The label includes the manufacturer's name (YKK AP America Inc.); the product name (YHS 50 FS Aluminum Storefront System); the design pressure; that the product complies with ASTM E 330, ASTM E 1886, ASTM E 1996, Large Missile Impact, Level D; and reference to Drawing # W14-37.

Limitations:

Design Drawings: Storefront assemblies complying with the requirements for large missile impact must comply and be installed in accordance with Drawing No. W14-37, titled "YHS 50 FS Aluminum Storefront System (LMI)" Sheets 1 thru 15 of 15, dated 09-31-14, signed and sealed by Javad Ahmad, P.E. on 02/17/15. The stated drawings will be referred to as the approved drawings in this evaluation report.

Fabrication and Assembly: YKK AP America Inc. aluminum storefront systems are fabricated in the factory. The aluminum curtain wall systems are assembled and glazed at the jobsite. The approved drawings referenced in this evaluation report indicate the options for the glazing construction.

Design pressure (DP):

The aluminum storefront systems for large missile impact have a design pressure rating of +70/-90 psf. Refer to drawing No. W14-37 for specific design pressure requirements.

Impact Resistance:

Products Installed in Accordance with Drawing No. W14-37: These assemblies satisfy TDI's criteria for protection from windborne debris in both the **Inland I** and **Seaward** zones. These assemblies have passed an impact criteria equivalent to Missile Level D specified in ASTM E 1996-04. Install these assemblies at any height on the structure that does not exceed the design pressure rating for the assembly. These assemblies do not require an impact protective system when installed in areas where windborne debris protection is required.

Acceptance of Other Assemblies:

- The approved drawings specify the limitations on horizontal stacking and overall width.
- The approved drawings specify limitations on vertical height.
- Use either single doors or double doors with the assemblies shown on the approved drawings.

Installation Instructions:

General: Prepare and install the assembly in accordance with the manufacturers recommended installation instructions. Detailed installation instructions and drawings are available in the approved drawings.

Installation:

Wall Framing Construction: The aluminum curtain wall system may be mounted to several types of wall framing construction. The types of wall framing construction allowed include:

- Concrete (minimum compressive strength: 3,000 psi)
- Wood dimension lumber (minimum Southern Yellow Pine)
- Masonry (f'm = 2,000 psi, ASTM C-90 Hollow/Filled Block)
- Steel (12 gauge minimum, A36 (minimum Fy = 36 ksi))

Refer to the design drawings for specific wall framing requirements.

Fastener Requirements:

- Refer to the approved drawings for the anchor layout and notes.
- Refer to the approved drawings for the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

Note: Keep the manufacturer's installation instructions on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.